WHAT IS CLAIMED IS:

1. An isolated and purified DNA sequence which encodes a *Zea mays* zmet2a methyltransferase and which hybridizes to the nucleic acid sequence shown in FIG. 1A under stringent conditions.

2. An isolated and purified zmet2a methyltransferase comprising the amino acid sequence shown in FIG. 2A.

3. An isolated and purified DNA sequence which encodes a *Zea mays* zmet2b methyltransferase and which hybridizes to the nucleic acid sequence shown in FIG. 1B under stringent conditions.

4. An isolated and purified zmet2a methyltransferase comprising the amino acid sequence shown in FIG. 2B.

5. A recombinant expression cassette comprising the isolated and purified nucleic acid sequence of claims 1 or 3, a promoter sequence and a polyadenylation signal sequence, wherein the promoter sequence is operably linked to the nucleic acid sequence and the nucleic acid sequence is operably linked to the polyadenylation signal sequence.

6. The recombinant expression cassette of claim 5 wherein the promoter sequence is a constitutive or a tissue specific promoter sequence.

7. A bacterial cell comprising the recombinant expression cassette of claim 5.

8. The bacterial cell of claim 7 wherein the bacterial cell is selected from the group consisting of *Agrobacterium tumefaciens* and *Agrobacterium rhizogenes*.

9. A transgenic plant comprising the recombinant expression cassette of claim 5.

10. The transgenic plant of claim 9 wherein the promoter sequence and the polyadenylation signal sequence is from Cauliflower Mosaic Virus 35S gene.

11. The transgenic plant of claim 10 wherein transgenic plant is *Zea mays*, *Oryza sativa*, *Secale cereale*, *Triticum aestivum*, *Daucus carota*, *Brassica oleracea*, *Cucumis melo*, *Cucumis sativus*, *Latuca sativa*, *Solanum tubersoum*, *Lycopersicon esculentum*, *Phaseolus vulgaris*, and *Brassica napus*.

12. Seed comprising the recombinant expression cassette of claim 5.

13. An isolated and purified DNA sequence which encodes a *Zea mays* zmet2b methyltransferase and which hybridizes to the nucleic acid sequence of FIG. 23 under stringent conditions.

14. A recombinant expression cassette comprising the isolated and purified nucleic acid sequence of claim 13, a promoter sequence and a polyadenylation signal sequence, wherein the promoter sequence is operably linked to the nucleic acid sequence and the nucleic acid sequence is operably linked to the polyadenylation signal sequence.

15. The recombinant expression cassette of claim 14 wherein the promoter sequence is a constitutive or a tissue specific promoter sequence.

16. A bacterial cell comprising the recombinant expression cassette of claim 14.

17. The bacterial cell of claim 16 wherein the bacterial cell is selected from the group consisting of *Agrobacterium tumefaciens* and *Agrobacterium rhizogenes*.

18. A transgenic plant comprising the recombinant expression cassette of claim 14.

19. The transgenic plant of claim 18 wherein the promoter sequence and the polyadenylation signal sequence is from Cauliflower Mosaic Virus 35S gene.

20. The transgenic plant of claim 19 wherein transgenic plant is *Zea mays, Oryza sativa, Secale cereale, Triticum aestivum, Daucus carota, Brassica oleracea, Cucumis melo, Cucumis sativus, Latuca sativa, Solanum tubersoum, Lycopersicon esculentum, Phaseolus vulgaris,* and *Brassica napus.*

21. Seed comprising the recombinant expression cassette of claim 14.

add a4